

Remarks

Section 112 Rejection

The Examiner rejected claim 19 and 20 because they were duplicates. Accordingly applicants have amended claim 20 to address this rejection.

Section 102 Rejection

The Examiner rejected claims 1-3 under section 102(e) as being anticipated by Lille, 6,725,526. Applicants' claim 1 has been amended to include a transfer layer of polydimethylsiloxane (PDMS) with a transferable coating of photoresist on an outer surface of the transfer layer; and a cushion layer consisting of rubber under the transfer layer providing flexible support for the transfer layer. The amended claim 1 includes three layers in order: transferable photoresist, PDMS transfer layer and rubber cushion layer. It is respectfully submitted that the Lille reference does not teach this structure. Inter alia, Lille does not teach the use of a transferable coating of photoresist on a PDMS transfer layer and contains no teaching of the use of rubber as a cushion layer.

Lille's polydimethylsiloxane layer is used a mold for topographic surface features, not for the transferring of photoresist from one surface to another. Lille's description of figure 3 references "a molding or transfer film on the master structure." (See col. 3:4-8). But Lille has no teaching that PDMS can be used to transfer a coating of photoresist to a workpiece.

Dependent claim 3 recites that the cushion layer is silicone rubber and, thereby, further distinguishes over Lille. In the previous rejection of claim 3 the Examiner stated that Lille's silicon wafer may contain "silicon rubber," but no supporting citation was given. It is respectfully submitted that this assertion is in error for two reasons. First, the claim is for "silicone rubber" not "silicon rubber" as the Examiner incorrectly states. Second, the applicants respectfully submit

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that the Examiner is mistaken about the nature of the silicon wafers used in semiconductor and thin film processing. The Examiner has cited no justification for the conclusion that a silicon wafer contains anything other than silicon. The Lille reference contains no mention of "silicone" or "rubber" or "silicon rubber." Absent a specific teaching in the Lille reference that his silicon wafer can contain anything other than silicon, to support this rejection the Examiner should either cite another reference or state that the Examiner's personal knowledge is being used. If the Examiner is using personal knowledge, then Examiner's affidavit is hereby requested.

However, amended claim 3 requires that the cushion layer consist of silicone rubber, so Lille's teaching of a silicon wafer cannot anticipate this claim element.

Section 103 Rejection of Claims 11-16

The Examiner rejected claims 11-16 under section 103(a) as being unpatentable over Lille, 6,725,526 in view of Drake, et al. 6,200,882. Claim 13 has been cancelled. Applicants submit that the amendments and arguments herein overcome these rejections. The Examiner has previously equated applicants' stiffener layer of claim 2 and 14 with the silicon wafer substrate in Drake, but the amended claims make it clear that the stiffener layer is adjacent to the cushion layer of rubber. Drake's teaching does not include a cushion layer of rubber; therefore, Drakes' silicon wafer is not comparable to applicants claimed stiffener layer. Since neither reference teaches a cushion layer of rubber as claimed, regardless of how the two references are combined, the applicants' claimed invention cannot be obtained. Claims 11, 12 and 14 contain various numerical limitations for which the Examiner cites Drake, but these citations fail because the numerical limitations are for non-analogous elements.

Drake is describing a method for processing a plurality of mirror assemblies formed from a silicon wafer:

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Planar base 301 has a first or substrate layer 311 which serves as the rigid support for the laminar structure of mirror assembly 200. Substrate 311, as shown most clearly in FIG. 7, has the shape of a parallelepiped. Substrate 311 has a length and width which define the length and width of mirror assembly 200 and has a thickness ranging from 75 to 600 microns and preferably approximately 175 microns. The relatively thick substrate has opposite top and bottom planar surfaces 312 and 313 and can be formed from any suitable material such as silicon, quartz and other relatively high-temperature glasses. In a preferred embodiment, substrate 311 is formed from N-type silicon in wafer form. Drake col. 9, lines 17-28.

Dependent claim 15 includes a cover-tape attached to the cushion layer opposite to the layer of photoresist, the cover-tape being larger in area than the cushion layer and extending beyond at least first and second edges of the cushion layer. The Examiner references a "mounting tape" mentioned in Drake col. 19, line 11 and states that Drake's mirror assembly is in a roll form as shown in figure 1 and col. 6, lines 35-37. Applicants respectfully disagree that these elements are comparable to the elements in applicants' claims. Because Drake does not teach a cushion layer of silicone rubber or any of the other elements of independent claim 1, it follows that he is not teaching to use of a cover-tape attached to a cushion layer as claimed. Drake's teaching about mounting mirror assemblies on a tape is not comparable to applicants' claimed cover-tape.

Claim 16 include a stiffener layer attached to the cushion layer, and a cover-tape attached to the stiffener layer opposite to the layer of photoresist. This claim also distinguishes over the references for the reasons given above.

Section 103 Rejection of Claims 17-23

The Examiner rejected claims 17-23 under section 103(a) as being unpatentable over Lille, 6,725,526 in view of Drake, et al. 6,200,882. However,

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the body of the office action fails to include any justification for the rejection of independent claim 17 and its dependent claims 18-23. It is, therefore, respectfully submitted that the Examiner has failed to make a prima facie case for an obviousness rejection.

Independent claim 17 is to a structure for applying photoresist to an surface of a workpiece that includes a cover-tape and at least two photoresist transfer pads disposed on the cover-tape. The photoresist transfer pads include a polymer layer with a transferable coating of photoresist on a surface of the polymer layer, and a cushion layer under the polymer layer opposite the transferable coating of photoresist. Neither reference cited includes photoresist transfer pads as claimed nor do the references teach a cover-tape with at least two photoresist pads as claimed.

The use of polydimethylsiloxane in Lille is not for transferring a photoresist, so it follows that Lille does not teach the formation of a structure that includes a layer of a polymer with a transferable layer of photoresist.

Dependent claim 18 adds that the polymer layer consists of polydimethylsiloxane. Dependent claim 21 adds that the cushion layer consists of silicone rubber. Each of these claims further distinguishes over the references as discussed above.

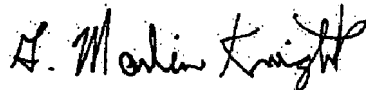
Dependent claim 22 the cover-tape and photoresist pads are formed into a roll. Dependent claim 23 recites that the photoresist pads are sequentially disposed on the cover-tape so that unrolling the roll sequentially exposes the photoresist pads.

Neither Lille nor Drake have any comparable teaching to applicants invention that includes a cover-tape with a plurality of photoresist pads.

Conclusion

Applicants respectfully submit that the amended claims are believed to clearly distinguish over the Lille and Drake references whether taken singly or together. Applicants, therefore, believe that all of the claims in application are now allowable.

Respectfully submitted,



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